

AMENDMENT

IN THE CLAIMS:

Please amend the claims as follows:

1. (CURRENTLY AMENDED) A vapor compression system comprising:
 - a compression device to compress a refrigerant to a high pressure, said compression device including a discharge;
 - a heat rejecting heat exchanger for cooling said refrigerant;
 - an expansion device for reducing said refrigerant to a low pressure, said expansion device including an inlet;
 - a heat accepting heat exchanger for evaporating said refrigerant;
 - a refrigerant line bypassing said heat rejecting heat exchanger between said discharge of said compression device and said inlet of said expansion device;~~and~~
 - a valve located on said refrigerant line to control a flow of said refrigerant between said discharge of said compression device and said inlet of said expansion device;
 - a sensor that detects a defrosting condition of said heat accepting heat exchanger; and
 - a control that opens said valve when said sensor detects said defrosting condition to allow said refrigerant to flow through said valve.
2. (PREVIOUSLY PRESENTED) The system as recited in claim 6 wherein said fluid is water.
3. (CANCELLED)
4. (CURRENTLY AMENDED) The system as recited in claim ~~3~~1 wherein said refrigerant from said ~~compressor~~compression device bypasses said heat rejecting heat exchanger, flows through said valve, flows through said expansion device, and flows through heat accepting heat exchanger to melt frost on said heat accepting heat exchanger when said valve is open.
5. (CURRENTLY AMENDED) The system as recited in claim ~~3~~1 wherein said control closes said valve when said sensor does not detect said defrosting condition to prevent said refrigerant from flowing through said valve.

6. (PREVIOUSLY PRESENTED) The system as recited in claim 1 further including a pump that draws a fluid through said heat rejecting heat exchanger, and said fluid exchanges heat with said refrigerant flowing through said heat rejecting heat exchanger.
7. (CURRENTLY AMENDED) The system as recited in claim 6 ~~further including a control,~~ wherein said control deactivates said pump to stop said fluid from flowing through said heat rejecting heat exchanger when said control opens said valve to allow said refrigerant to flow through said valve.
8. (ORIGINAL) The system as recited in claim 1 wherein said refrigerant is carbon dioxide.
9. (CURRENTLY AMENDED) The system as recited in claim ~~3~~1 further including a second valve positioned between said discharge of said compression device and said heat rejecting heat exchanger, and said control closes said second valve when said sensor detects said defrosting condition to prevent said refrigerant from flowing through said second valve.
10. (CURRENTLY AMENDED) The system as recited in claim ~~3~~1 further including a second valve positioned between said gas cooler and said inlet of said expansion device, and said control closes said second valve when said sensor detects said defrosting condition to prevent said refrigerant from flowing through said second valve.

11. (CURRENTLY AMENDED) The system as recited in claim 31 wherein said valve includes a first port in fluid communication with said discharge of said compression device, a second port in fluid communication with said heat rejecting heat exchanger, and a third port in fluid communication with said inlet of said expansion device, and said control closes said second port to prevent said refrigerant from said compression device from flowing through said heat rejecting heat exchanger and opens said third port to allow said refrigerant from said compression device to flow through said expansion device along said refrigerant line when said sensor detects said defrosting condition and said control opens said second port to allow said refrigerant from said compression device to flow through said heat rejecting heat exchanger and closes said third port to prevent said refrigerant from said compression device from flowing through said expansion device along said refrigerant line when said sensor does not detect said defrosting condition.

12. (CURRENTLY AMENDED) A vapor compression system comprising:
a compression device to compress a refrigerant to a high pressure, said compression device
including a discharge;
a heat rejecting heat exchanger for cooling said refrigerant;
an expansion device for reducing said refrigerant to a low pressure, said expansion device
including an inlet;
a heat accepting heat exchanger for evaporating said refrigerant;
a refrigerant line bypassing said heat rejecting heat exchanger between said discharge of
said compression device and said inlet of said expansion device;
a valve located on said refrigerant line to control a flow of refrigerant between said
discharge of said compression device and said inlet of said expansion device.~~The system as~~
~~recited in claim 3~~ wherein said valve includes a first port in fluid communication with said inlet
of said expansion device, a second port in fluid communication with said heat rejecting heat
exchanger, and a third port in fluid communication with said discharge of said compression
device, and said control closes said second port to prevent said refrigerant from said heat
rejecting heat exchanger from flowing through said expansion device and opens said third port to
allow said refrigerant from said compression device to flow through said expansion device along
said refrigerant line when said sensor detects said defrosting condition and said control opens
said second port to allow said refrigerant from said heat rejecting heat exchanger to flow through
said expansion device and closes said third port to prevent said refrigerant from said compression
device from flowing through said expansion device along said refrigerant line when said sensor
does not detect said defrosting condition;
a sensor that detects a defrosting condition of said heat accepting heat exchanger; and
a control that opens said valve when said sensor detects said defrosting condition to allow
said refrigerant to flow through said valve.

13. (CURRENTLY AMENDED) The system as recited in claim 1 wherein ~~an~~said expansion
device includes an orifice, and said orifice of said expansion device is adjusted to control one of
an inlet temperature of said refrigerant entering said heat rejecting heat exchanger, a power of said
compression device, and said high pressure of said system.

14-17. (CANCELLED)

18. (PREVIOUSLY PRESENTED) A method of regulating a high pressure of a transcritical vapor compression system comprising the steps of:

compressing a refrigerant to the high pressure in a compression device including a discharge;

cooling the refrigerant by exchanging heat with a fluid, and the fluid accepts heat from the refrigerant;

expanding the refrigerant to a low pressure in an expansion device including inlet;

evaporating the refrigerant in a heat accepting heat exchanger;

sensing a defrosting condition of the heat accepting heat exchanger;

flowing the refrigerant along a refrigerant line from the discharge of the compression device to the inlet of the expansion device; and

melting frost on the heat accepting heat exchanger when the step of sensing the defrosting condition indicates the defrosting condition is necessary.

19. (CURRENTLY AMENDED) The method as recited in claim 18 further including the steps of sensing no frost on the heat accepting heat exchanger and blocking the flow of refrigerant from the ~~step of compressing to the step of expanding~~compression device to the expansion device.

20. (PREVIOUSLY PRESENTED) The method as recited in claim 18 wherein the refrigerant is carbon dioxide.